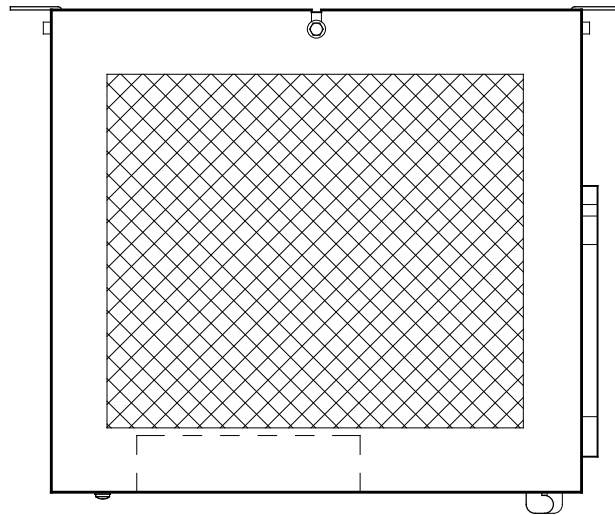


TOP VIEW



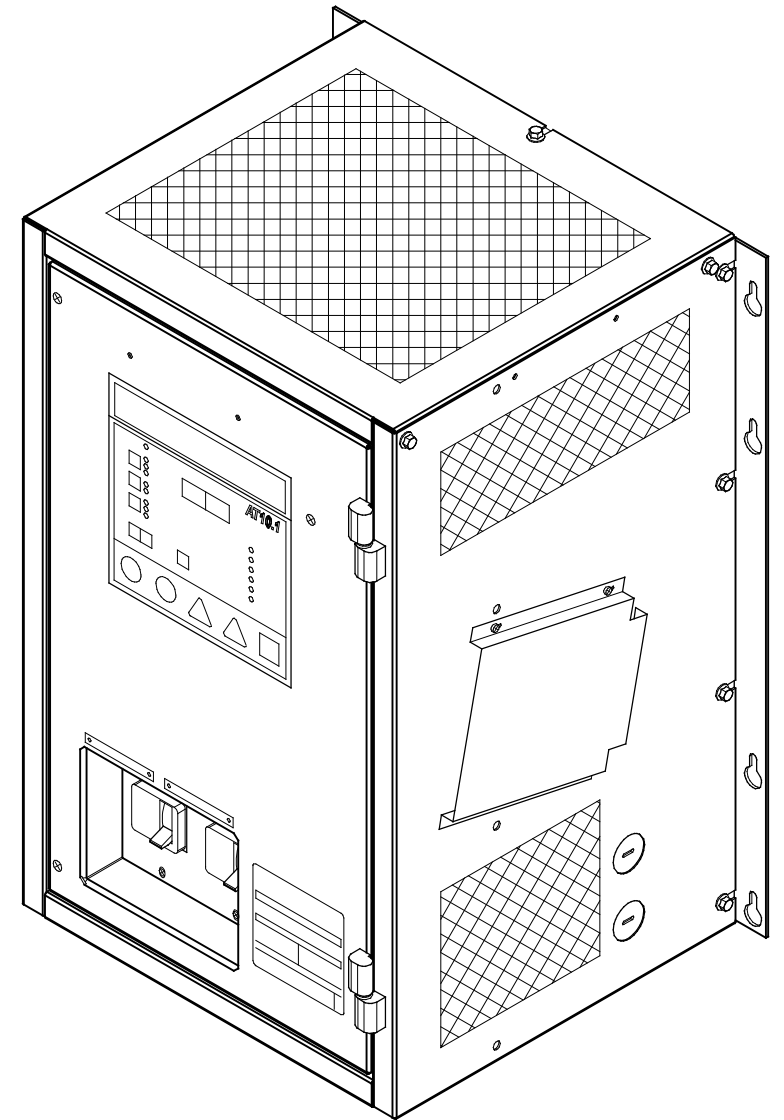
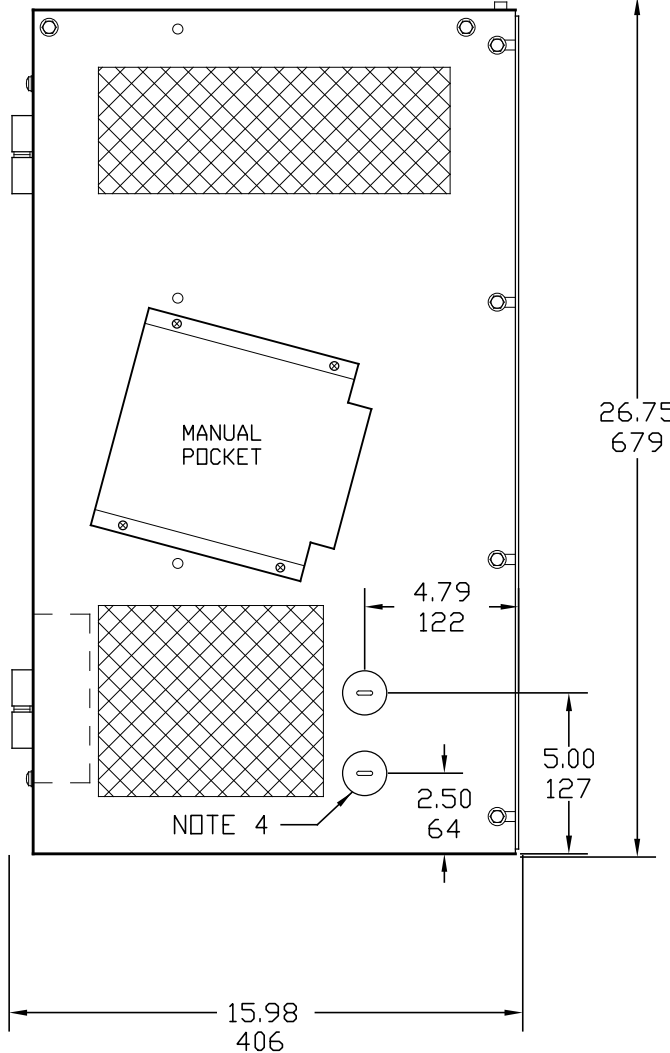
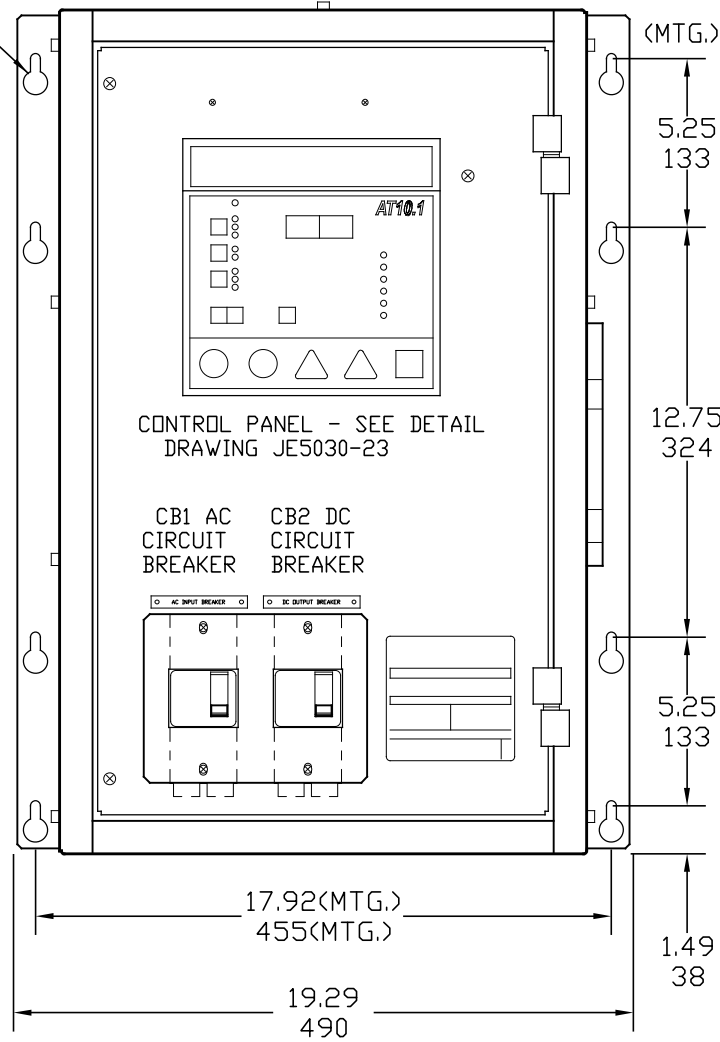
NOTES:

- 1) ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT.
- 2) ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP & SIDES) OF CABINET FOR COOLING.
- 3) EIGHT (8) KEY-HOLE SLOTS ARE PROVIDED ON BACK OF ENCLOSURE AS SHOWN, FOR WALL-MOUNTING WITH 0.25in/6.25mm HARDWARE.
- 4) TWO (2) 1.31in/33mm DIA STANDARD PRE-FAB KNOCKOUTS ARE PROVIDED, AS SHOWN FOR UP TO 1in/25mm CONDUIT. IF ADDITIONAL CONDUIT ENTRANCES ARE REQUIRED BY USER, ENCLOSURE SHOULD BE FIELD-MODIFIED BY INSTALLER.
- 5) BATTERY CHARGER SHIPPING WEIGHT: SEE PRODUCT LITERATURE.

FRONT VIEW

SIDE VIEW

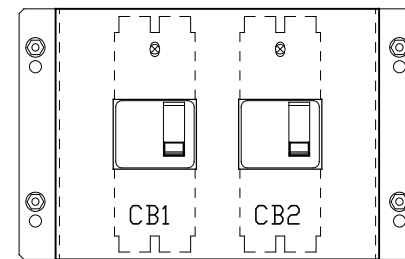
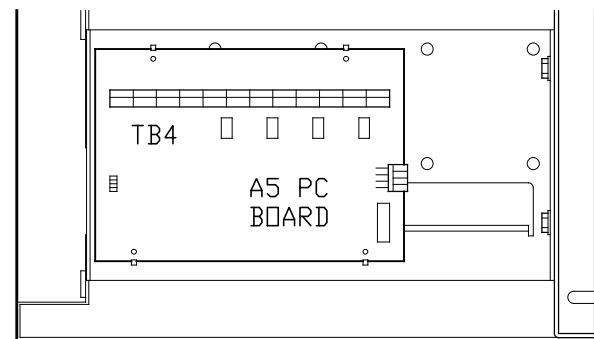
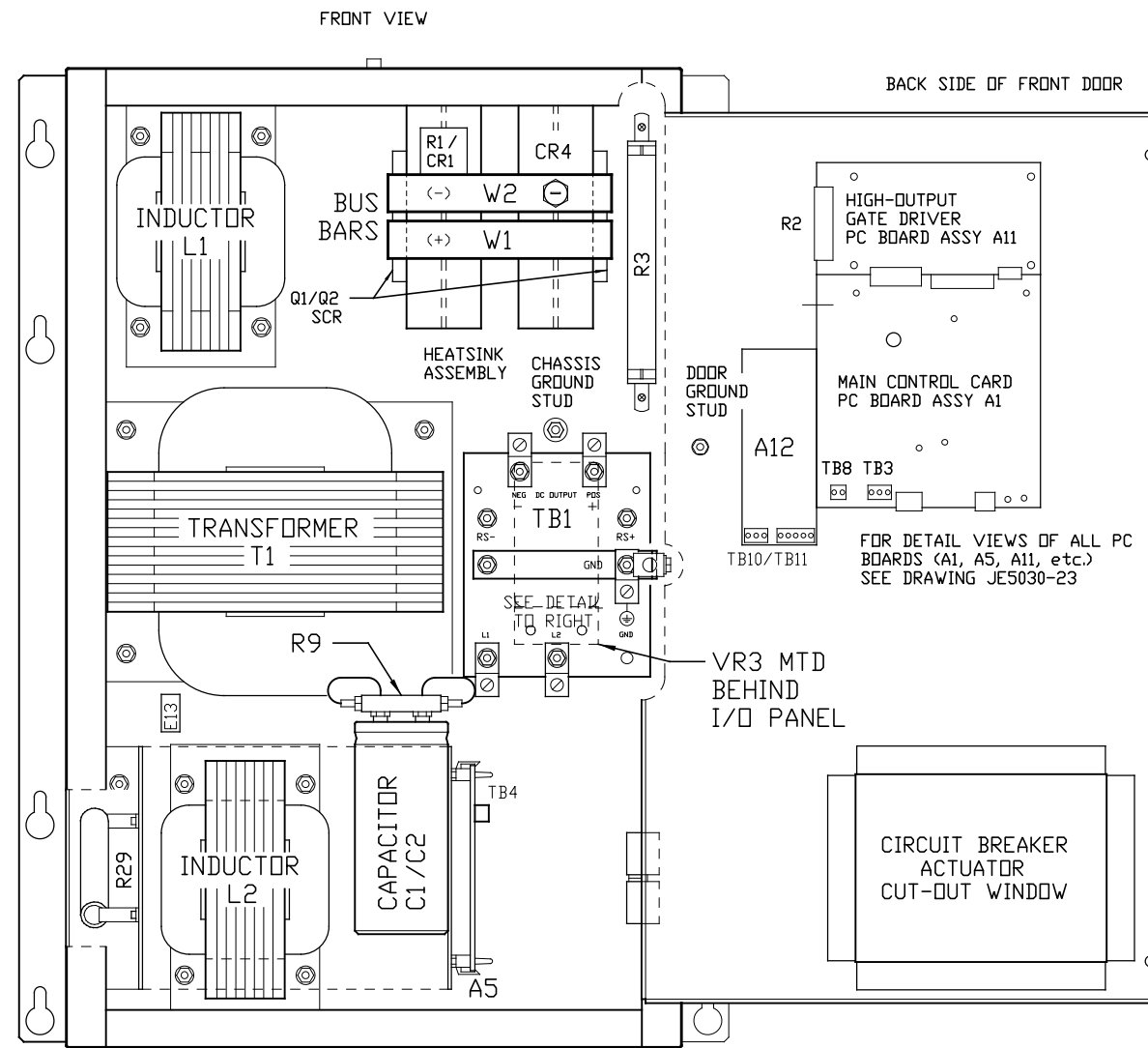
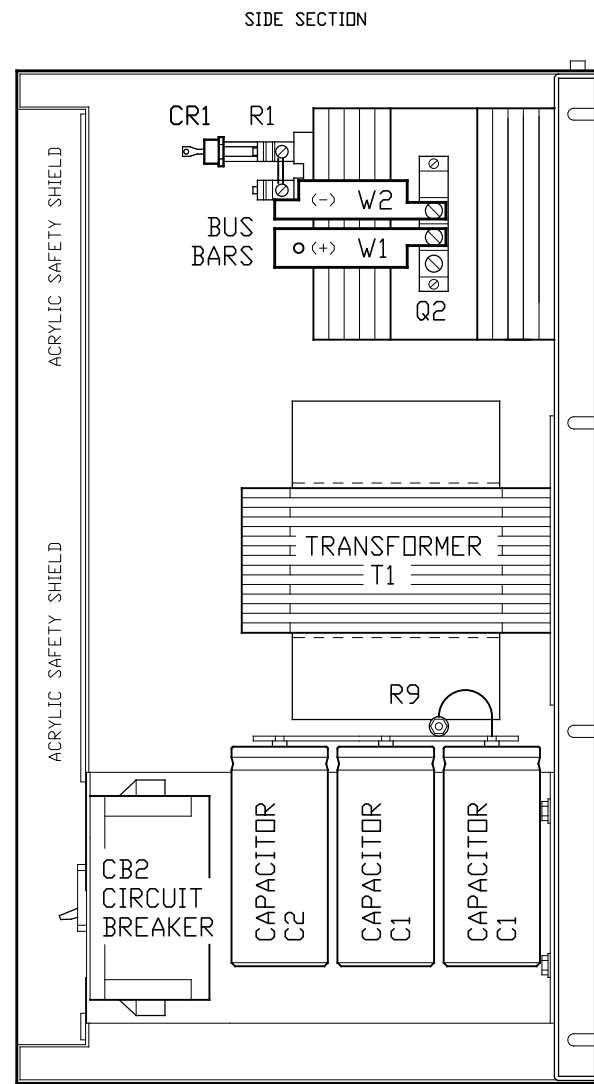
NOTE 3



DUAL DIMENSIONS in mm

30-50ADC W/ COMMON OPTIONS

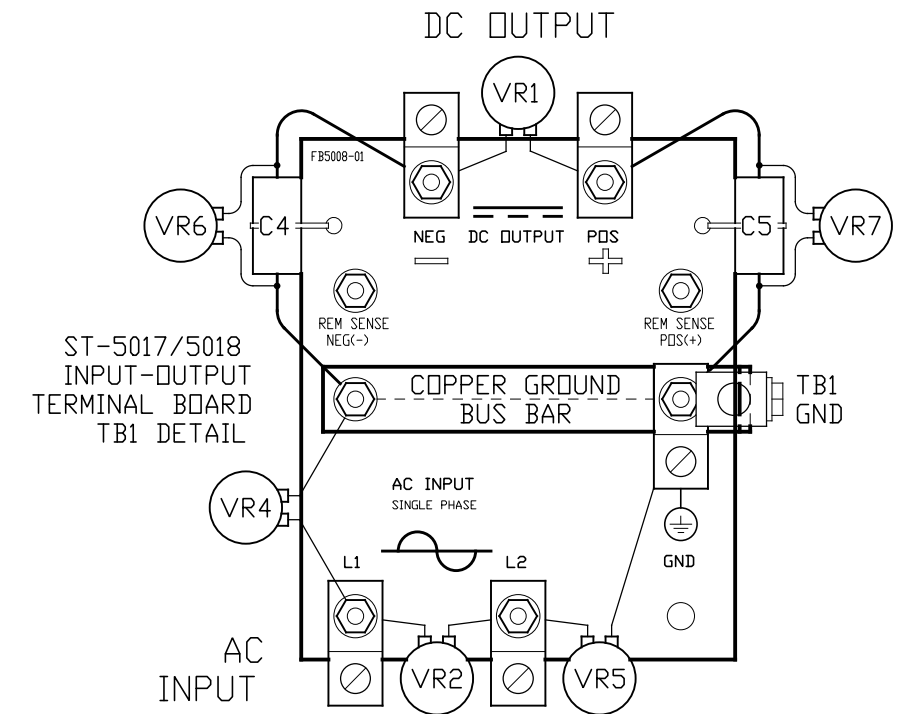
			THIRD ANGLE PROJECTION		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW	110421	TITLE AT10.1 SERIES BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5017 ENCLOSURE	
0	N/A	110421	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			DRAWING No JE5025-23
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					REV 0	B
REV	ECN No	DATE	SCALE NTS	SALES No	SHEET 1 OF 1	



AC CIRCUIT BREAKER DC CIRCUIT BREAKER

SYM	STANDARD COMPONENT DESCRIPTION
A1	MAIN CONTROL PC BOARD
A11	HIGH-OUTPUT GATE DRIVER PC BRD
C4	EMI OUTPUT FILTER CAP (NEG)
C5	EMI OUTPUT FILTER CAP (POS)
CB1	AC INPUT CIRCUIT BREAKER (BD2)
CB2	DC OUTPUT CIRCUIT BREAKER (BD2)
CR4	FREE-WHEELING DIODE
L1	MAIN INDUCTOR
Q1	SILICON-CONTROLLED RECTIFIER
Q2	SILICON-CONTROLLED RECTIFIER
R1	MAIN DC SHUNT, NEG(-) BUS
R2	RATING RESISTOR
R3	PWR SUPPLY BALLAST RES (130VDC)
T1	POWER TRANSFORMER
TB1	I/O TERMINAL BOARD
TB3	SUMMARY ALARM CONTACTS
TB8	TEMPCD PROBE TERMINAL BLOCK
VR1	OUTPUT SURGE SUPPRESSOR
VR2	INPUT SURGE SUPPRESSOR
VR4	INPUT SURGE SUPPRESSOR
VR5	INPUT SURGE SUPPRESSOR
VR6	OUTPUT SURGE SUPPRESSOR
VR7	OUTPUT SURGE SUPPRESSOR
W1	COPPER BUS BAR (POS LEG)
W2	COPPER BUS BAR (NEG LEG)

SYM	FEATURED OPTION COMP DESCRIPTION
A5	AUXILIARY ALARM RELAY PC BOARD
A12	COMMUNICATIONS MODULE PC BOARD
C1	BATTERY ELIMINATOR FILTER CAP
C1	FILTER CAPACITOR
R29	COMM MOD BALLAST RES (130VDC)
TB4	AUX ALARM PCB (A5) TERM BLOCK
CR1	POLARITY DIODE
VR3	AC INPUT LIGHTNING ARRESTOR
E13	INDUCTOR INTER-CONNECT POINT
L2	FILTER INDUCTOR
R9	FILTER CAP BLEED RESISTOR



30-50ADC W/ COMMON OPTIONS

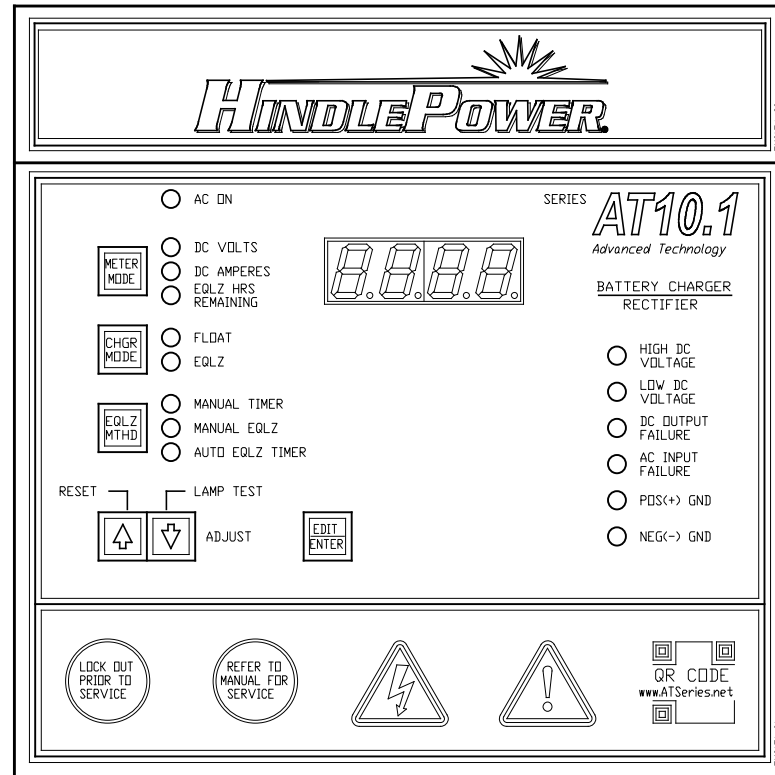
I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1(+/-)	PDS/NEG DC OUTPUT TERMS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
REM SENSE(+/-)	PDS/NEG REMOTE SENSE TERMINALS - 1/4-20 ZPS STUDS	1/4in RING LUG
(2) TB1-GND	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB1-L1/L2	AC INPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB3	SUMMARY ALARM TERMINAL BLOCK - SOLDERLESS COMP SCREW	#22-14 AWG
TB4	AUXILIARY ALARM TERM BLOCK - SOLDERLESS COMP SCREW	#22-14 AWG
TB8	TEMPCD PROBE (A10) TERM BLK - SOLDERLESS COMP SCREW	#22-14 AWG

0	N/A	110421	THIRD ANGLE PROJECTION
REV	ECN No	DATE	DRAWN BY KMW 110421
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG
			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
TITLE AT10.1 SERIES BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-5017			
DRAWING No		REV	
JE5028-23		0 B	
SCALE	SALES No	SHEET 1 OF 1	
NTS			

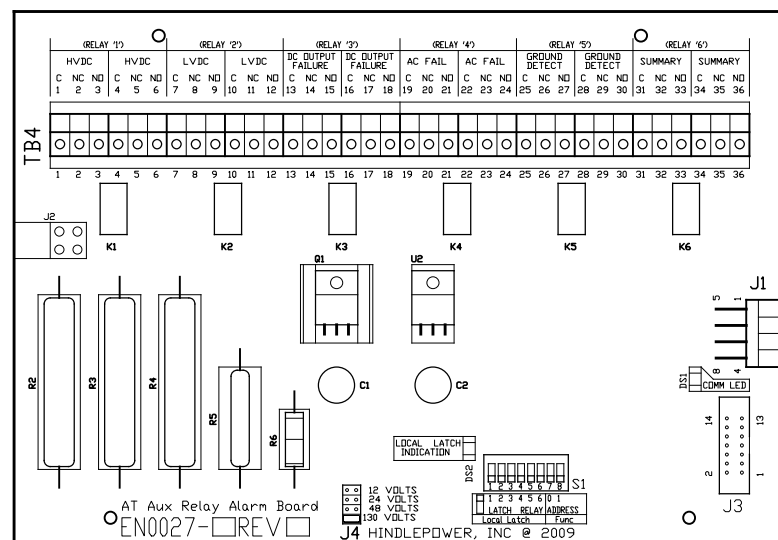
- INDICATOR LIGHTS (LEDs):
- DS01 - GREEN - AC ON
 - DS02 - RED - DC VOLTS
 - DS03 - RED - DC AMPERES
 - DS04 - RED - EQUALIZE HRS REMAINING
 - DS05 - GREEN - FLOAT
 - DS06 - AMBER - EQUALIZE
 - DS07 - AMBER - MANUAL TIMER
 - DS08 - AMBER - MANUAL EQUALIZE
 - DS09 - AMBER - AUTO EQUALIZE TIMER

- DS10 - RED - LOW LEVEL DETECT
- DS11 - RED - (METER DISPLAY)
- DS12 - RED - (METER DISPLAY)
- DS13 - RED - HIGH DC VOLTAGE
- DS14 - RED - LOW DC VOLTAGE
- DS15 - RED - DC OUTPUT FAILURE
- DS16 - RED - AC INPUT FAILURE
- DS17 - RED - POS(+) GROUND FAULT
- DS18 - RED - NEG(-) GROUND FAULT



CONTROL PANEL
(PART No. FK0151-01)

NOTE: UNLESS OTHERWISE SPECIFIED, ALL ALARM TERMINAL BLOCKS (TB3/TB4/TB8) ARE SOLDERLESS COMPRESSION TERMINALS, ACCEPTING #22-14 AWG WIRE. ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND ALARM RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS 0.5A @ 125VAC/VDC RESISTIVE.



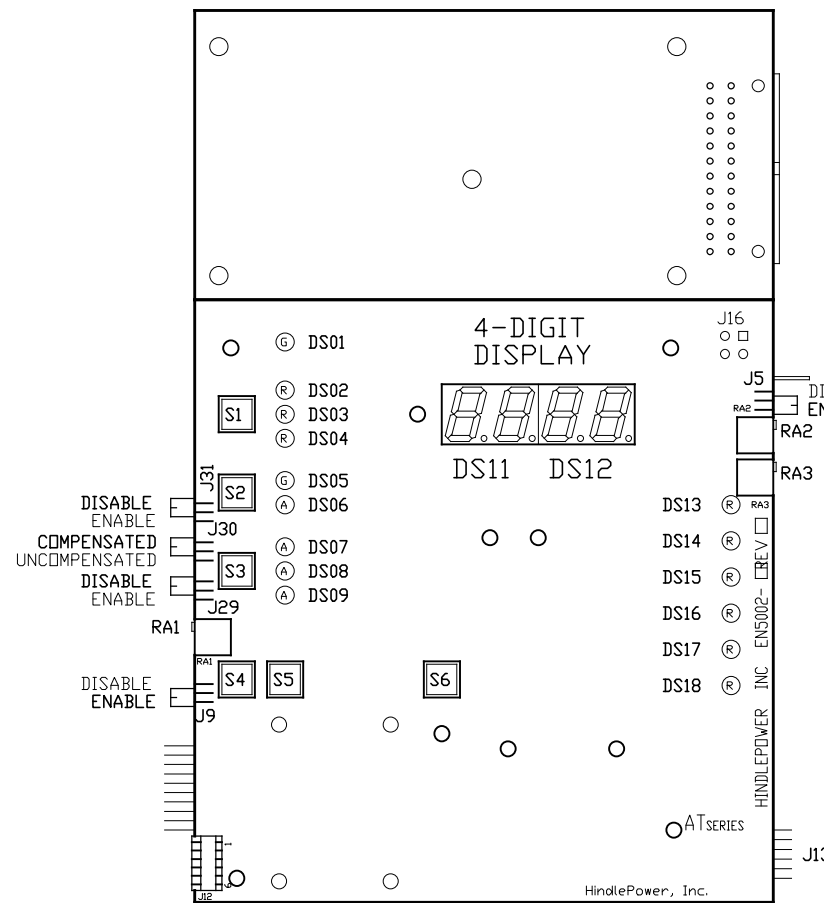
AUXILIARY ALARM RELAY PC BOARD (A5)

A5-J1 CONNECTED TO
A1-J2 VIA EH5045-0#
8-PIN SERIAL CABLE

OTHER CONTROLS:
RA1 - LOW LEVEL
DETECT ADJUST
RA2 - GROUND FAULT
BALANCE
RA3 - GROUND FAULT
SENSITIVITY

NON-USER ACCESSED JUMPERS:
J3 - OLD A5 RIBBON CONNECTOR
J12 - BOARD PROGRAMMING
J14 - OLD FORCED LOAD SHARING
J15 - MANUFACTURING TEST
J16 - OLD INTERNAL TEMP

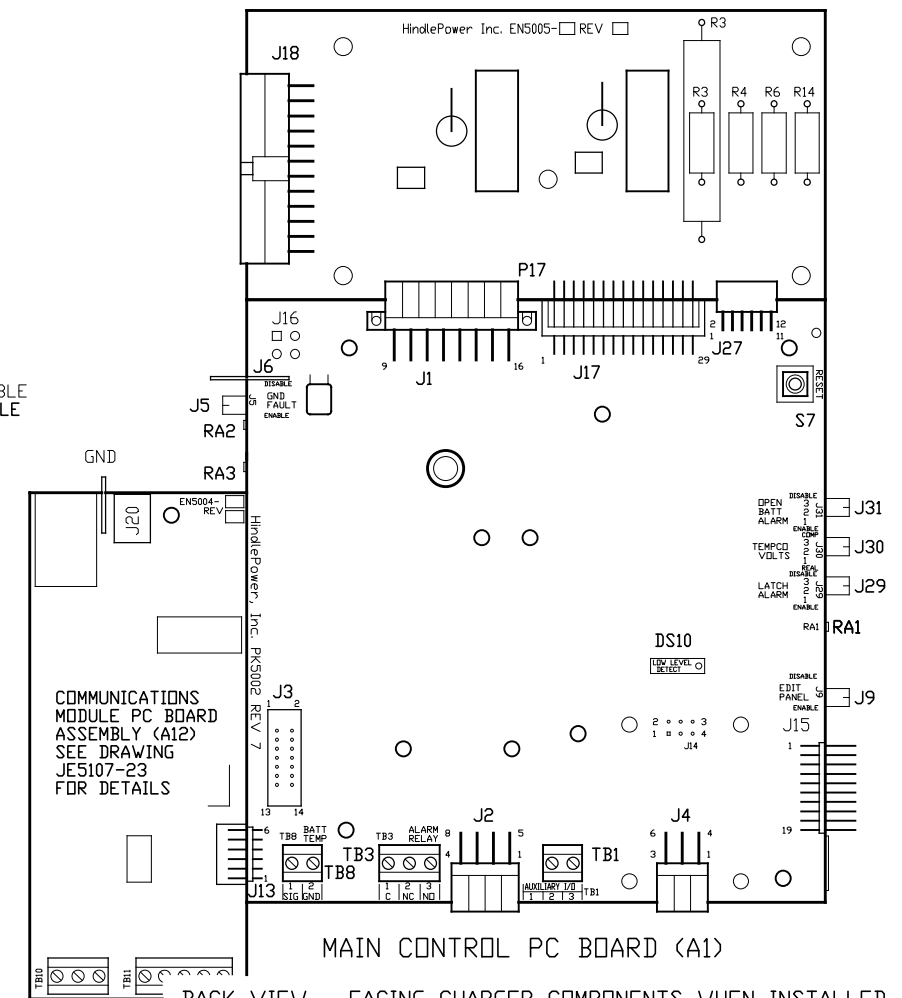
HIGH-OUTPUT GATE DRIVER PC BOARD (A11)



MAIN CONTROL PC BOARD (A1)

FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED

HIGH-OUTPUT GATE DRIVER PC BOARD (A11)



MAIN CONTROL PC BOARD (A1)

BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

USER JUMPERS:

- J1 - MAINFRAME SIGNAL HARNESS (NOT USED IN 30-100A)
- J2 - AUX ALARM RELAY BOARD (A5) SERIAL CONNECTOR
- J4 - FORCED LOAD SHARING CABLE INTERCONNECTOR
- J5 - GROUND FAULT ENABLE/DISABLE
- J6 - EARTH GROUND CONNECTOR
- J9 - FRONT PANEL ENABLE/DISABLE (LOCKOUT)
- J13 - COMMUNICATIONS PC BOARD (A12) INTERCONNECTOR
- J17 - HD GATE DRIVER PC BOARD (A11) INTERCONNECTOR
- J18 - MAINFRAME SIGNAL HARNESS (30-100A OUTPUT)
- J27 - not used (3PH GATE DRIVER INTERCONNECTOR)
- J29 - LATCHING ALARMS ENABLE/DISABLE SELECTOR
- J30 - TEMPDC VOLTAGES (COMPENSATED/UNCOMP) SELECTOR
- J31 - BATTERY OPEN ALARM ENABLE/DISABLE SELECTOR

SWITCHES:

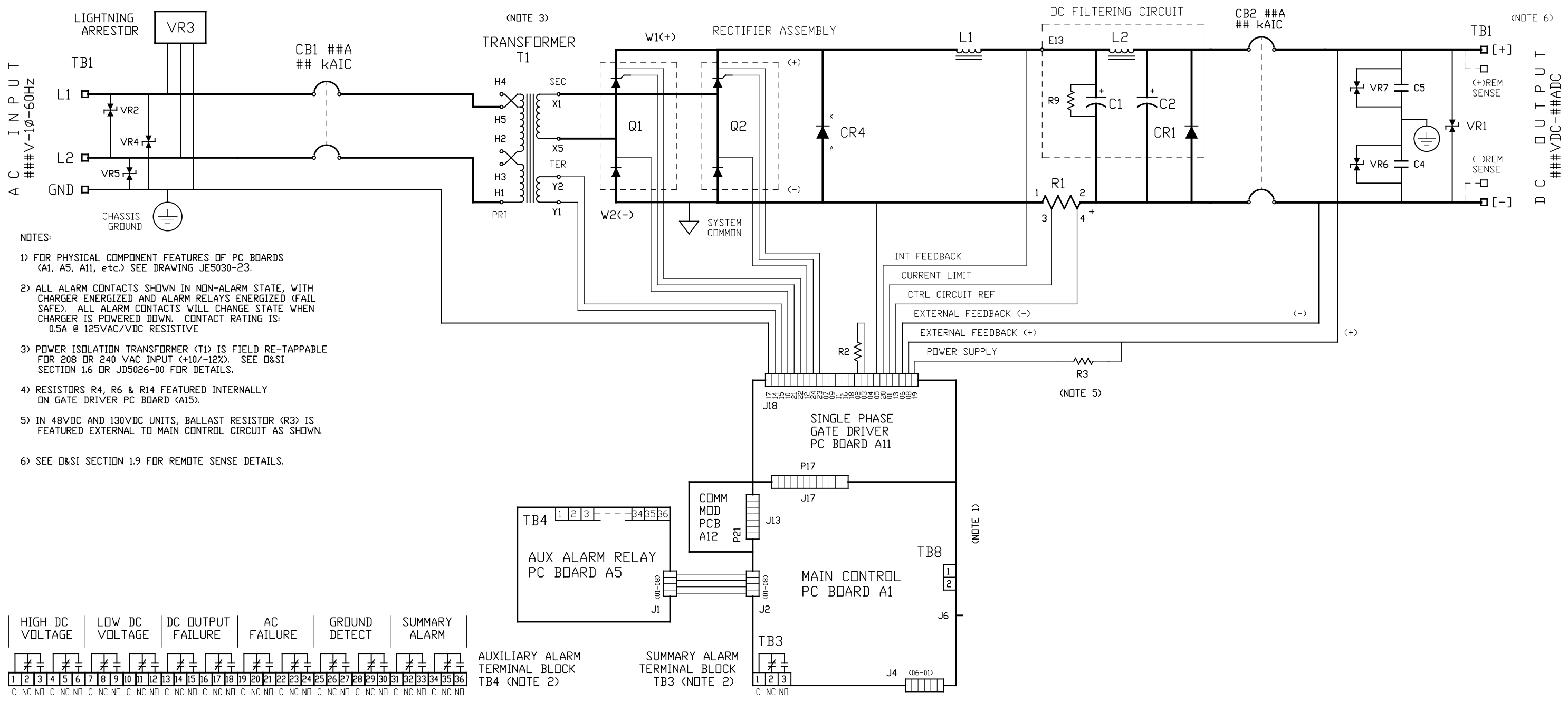
- S1 - METER MODE
- S2 - CHARGER MODE
- S3 - EQUALIZE METHOD
- S4 - Δ ADJUST
- S5 - ∇ ADJUST
- S6 - EDIT / ENTER
- S7 - PROCESSOR MANUAL RESET

TERMINAL BLOCKS:

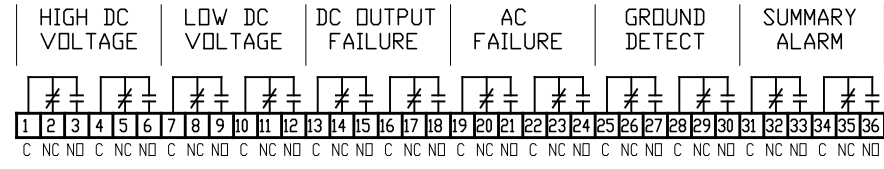
- TB3 - SUMMARY ALARM RELAY CONTACTS
- TB4 - AUX ALARM RELAY CONTACTS
- TB8 - OPT TEMPDC PROBE (A10) CONN
- TB18 - REM SHUTDOWN INTERFACE

30-50ADC W/ COMMON OPTIONS

			THIRD ANGLE PROJECTION				1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW 110421		TITLE AT10.1 SERIES BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL			
0 N/A 110421			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5030-23		REV 0 B	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					SCALE NTS		SALES No	
REV	ECN No	DATE			SHEET 1 OF 1			



- NOTES:
- 1) FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A5, A11, etc.) SEE DRAWING JE5030-23.
 - 2) ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND ALARM RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS: 0.5A @ 125VAC/VDC RESISTIVE
 - 3) POWER ISOLATION TRANSFORMER (T1) IS FIELD RE-TAPPABLE FOR 208 OR 240 VAC INPUT (+10/-12%). SEE D&SI SECTION 1.6 OR JD5026-00 FOR DETAILS.
 - 4) RESISTORS R4, R6 & R14 FEATURED INTERNALLY ON GATE DRIVER PC BOARD (A15).
 - 5) IN 48VDC AND 130VDC UNITS, BALLAST RESISTOR (R3) IS FEATURED EXTERNAL TO MAIN CONTROL CIRCUIT AS SHOWN.
 - 6) SEE D&SI SECTION 1.9 FOR REMOTE SENSE DETAILS.



STANDARD AT10.1 COMPONENTS:

A1	MAIN CONTROL PC BOARD	(NOTE 1)
A11	SINGLE PHASE 100A GATE DRIVER PCB	(NOTE 1)
C4	DC OUTPUT EMI FILTER CAPACITOR (-) TO GROUND	
C5	DC OUTPUT EMI FILTER CAPACITOR (+) TO GROUND	
CB1	AC INPUT CIRCUIT BREAKER	
CB2	DC OUTPUT CIRCUIT BREAKER	
CR4	FREE-WHEELING DIODE	
L1	MAIN INDUCTOR	
Q1	SILICON-CONTROLLED RECTIFIER (SCR) MODULE	
Q2	SILICON-CONTROLLED RECTIFIER (SCR) MODULE	

STANDARD AT10.1 COMPONENTS:

R1	MAIN DC SHUNT, NEG(-) BUS	
R2	CURRENT RATING RESISTOR	
R3	POWER SUPPLY BALLAST RESISTOR	(NOTE 5)
R4	EXTERNAL SCALING RESISTOR (+)	(NOTE 4)
R6	INTERNAL SCALING RESISTOR	(NOTE 4)
R14	EXTERNAL SCALING RESISTOR (-)	(NOTE 4)
T1	POWER ISOLATION TRANSFORMER	
TB1	INPUT/OUTPUT TERMINAL BLOCK	
TB3	SUMMARY ALARM TERMINAL BLOCK	(NOTE 2)
TB8	OPTIONAL TEMP/CD PROBE (A10) INTERCONNECTOR	
VR1	DC OUTPUT SURGE SUPPRESSOR (-) TO (+)	
VR2	AC INPUT SURGE SUPPRESSOR (L1-L2)	
VR4	AC INPUT SURGE SUPPRESSOR (L1-GND)	
VR5	AC INPUT SURGE SUPPRESSOR (L2-GND)	
VR6	DC OUTPUT SURGE SUPPRESSOR (-) TO GROUND	
VR7	DC OUTPUT SURGE SUPPRESSOR (+) TO GROUND	
W1	POSITIVE(+) DC BUS BAR	
W2	NEGATIVE(-) DC BUS BAR	

SUPPLIED AT10.1 OPTION COMPONENTS:

DC FILTERING ASSEMBLY:

C1	DC OUTPUT FILTERING CAPACITOR
CR1	POLARITY DIODE
E13	INDUCTOR INTERCONNECTION POINT
L2	FILTERING INDUCTOR
R9	FILTER CIRCUIT BLEED RESISTOR
C2	BATTERY ELIMINATOR FILTER CAPACITOR
VR3	AC INPUT LIGHTNING ARRESTOR

SUPPLIED AT10.1 OPTION COMPONENTS:

A5	AUXILIARY ALARM RELAY PC BOARD	(NOTE 1)
TB4	AUXILIARY ALARM (A5) TERMINAL BLOCK	(NOTE 2)
A12	COMMUNICATIONS MODULE PC BOARD	(NOTE 1)

REV	ECN No	DATE	0	N/A	110421
DRAWN BY			KMW	110421	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG					
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					

THIRD ANGLE PROJECTION

HINDLEPOWER

1075 Saint John Street
Easton, PA 18042-6661
PH 610-330-9000 FAX 610-330-8510
www.hindlepowerinc.com

TITLE: BATTERY CHARGER SCHEMATIC:
30-50ADC W/ COMMON OPTIONS

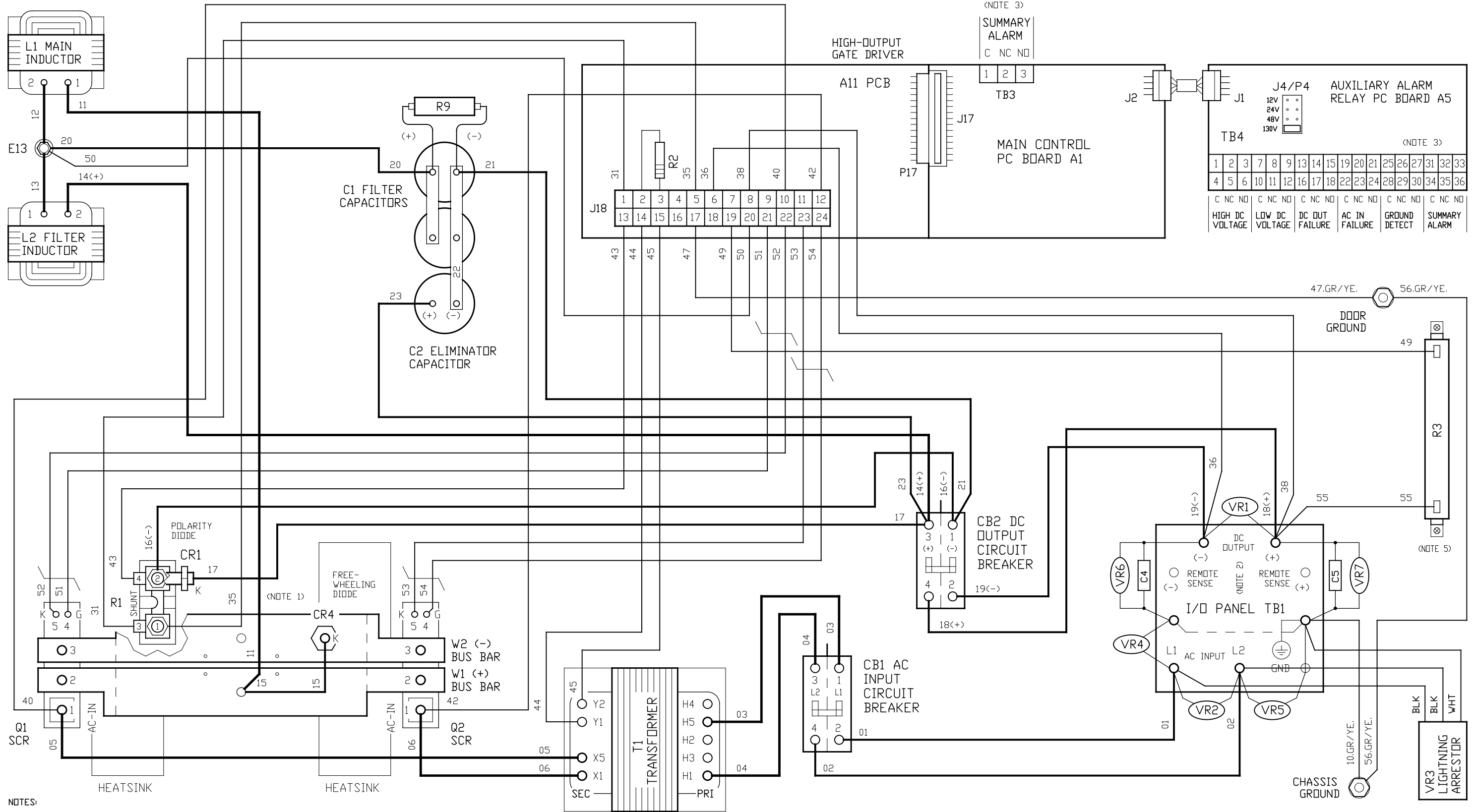
DRAWING No: JE5032-23

REV: 0

SCALE: NTS

SALES No:

SHEET: 1 OF 1



- NOTES:
- 1) CHARGER COMPONENTS ARE CONNECTED WITH BLACK FLAME-RETARDANT SWITCHBOARD INSULATION SYSTEM (SIS) TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS. GROUND WIRES #10, #47 & #56 ARE GREEN WITH YELLOW STRIPE. DIODES (CR1 & CR4) ARE ANODE-MOUNTED TYPE, WIRE TO CATHODE.
 - 2) WHEN REMOTE SENSE IS USED, WIRE# 36 CONNECTS A11-J18-06 TO REMOTE SENSE(-), AND WIRE# 38 CONNECTS A11-J18-08 TO REMOTE SENSE(+).
 - 3) STANDARD USER ALARM CONTACTS (TB3, TB4, etc.) ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE.
 - 4) SEE SCHEMATIC FOR TRANSFORMER (T1) PRIMARY CONNECTION TABLE.
 - 5) IN 130 VDC UNITS, BALLAST RESISTOR (R3) IS SUPPLIED EXTERNALLY AS SHOWN.

- FEATURED OPTIONS:
- STANDARD DC OUTPUT FILTERING
 - BATTERY ELIMINATOR FILTER CAP
 - AC INPUT CIRCUIT BREAKER
 - DC OUTPUT CIRCUIT BREAKER
 - AUXILIARY ALARM RELAY PC BOARD
 - AC INPUT LIGHTNING ARRESTOR

REV	ECN No	DATE	0	N/A	110421
DRAWN BY			KMW	110421	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG					
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					

THIRD ANGLE PROJECTION

HINDLEPOWER

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 PH 610-330-9000 FAX 610-330-8510
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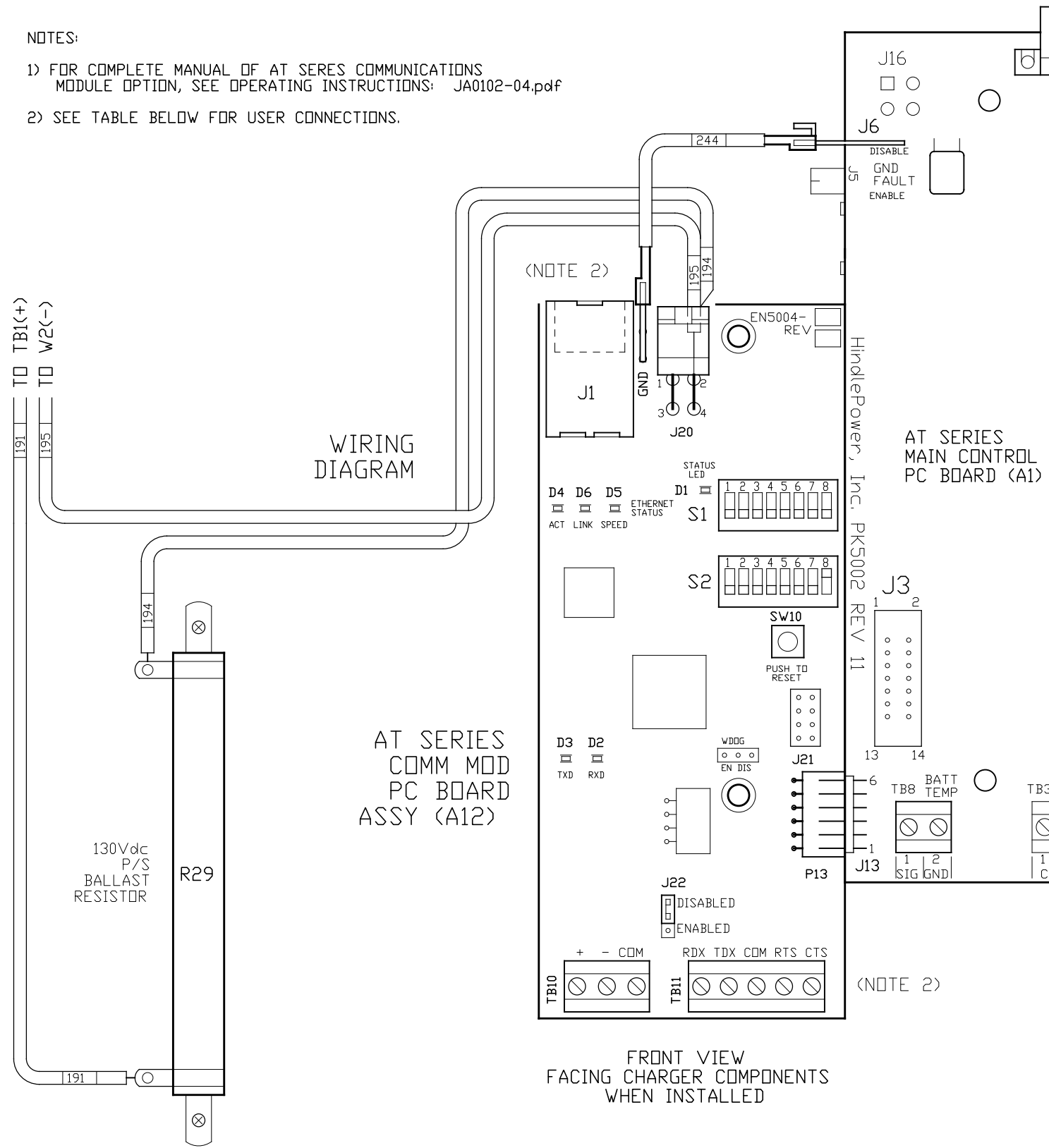
TITLE BATTERY CHARGER CONNECTION DIAGRAM:
 30-50ADC W/ COMMON OPTIONS

DRAWING No JE5034-23 REV 0 B

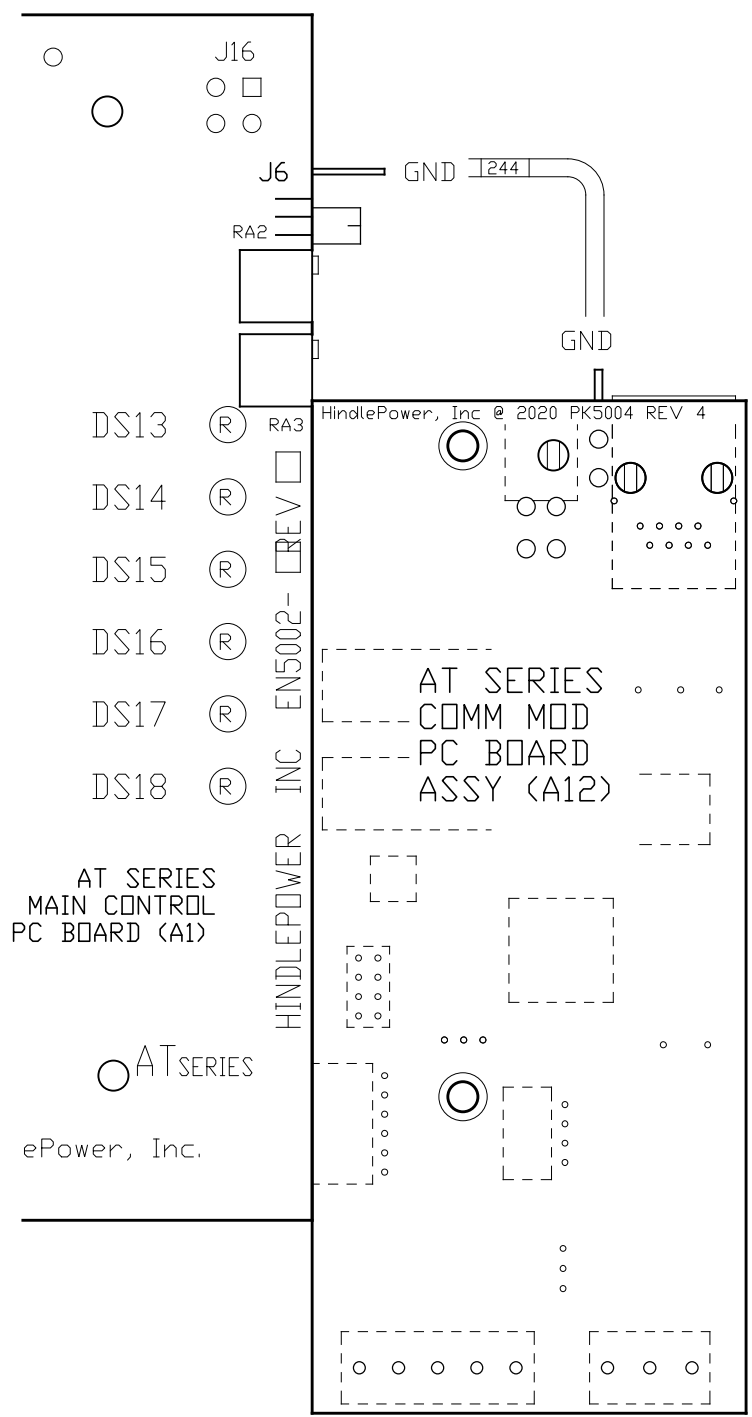
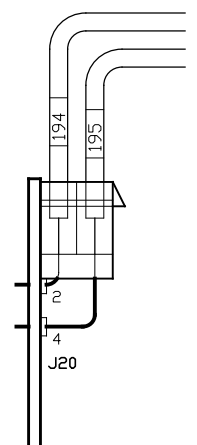
SCALE NTS SALES No SHEET 1 OF 1

NOTES:

- 1) FOR COMPLETE MANUAL OF AT SERIES COMMUNICATIONS MODULE OPTION, SEE OPERATING INSTRUCTIONS: JA0102-04.pdf
- 2) SEE TABLE BELOW FOR USER CONNECTIONS.



SIDE VIEW OF PC BOARD



BACK VIEW FACING CHARGER DOOR WHEN INSTALLED

- INDICATOR LIGHTS:
- D1 - STATUS LED, SPI COMM
 - D2 - RXD, SERIAL RECEIVE LED
 - D3 - TXD, SERIAL TRANSMIT LED
 - D4 - ACT, ETHERNET ACTIVITY LED
 - D5 - SPEED, ETHERNET 10/100 LED
 - D6 - LINK, ETHERNET STATUS LED
- JUMPERS / CONNECTORS:
- J20 - POWER SUPPLY CONNECTION
 - J21 - FACTORY CONNECTION
 - J22 - RS-485 TERMINATING RESISTOR (ENABLE/DISABLE)
 - P13 - PLUG FOR MAIN CONTROL PCB (A1) (J13 CONNECTION)
- SWITCHES:
- S1 - CONFIGURATION SWITCHES
 - S2 - MODBUS ADDRESS
 - SW10 - RESET BUTTON

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB10	RS-485 SERIAL TERMINALS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
TB11	RS-232 SERIAL TERMINALS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
J1	ETHERNET SERIAL TERMINAL - RJ45 SOCKET	CAT 5,6 UTP
GND	PC BOARD GROUND TERMINAL - SLIP-ON TAB	QC LUG

30-50ADC W/ COMMON OPTIONS

			THIRD ANGLE PROJECTION		HindlePower, Inc. © 2020 PK5004 REV 4 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW	110421	TITLE AT SERIES BATT CHGR COMMUNICATIONS MODULE OPTION DETAIL	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5107-23	
0	N/A	110421	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		REV 0	B
REV	ECN No	DATE	SCALE NTS	SALES No	SHEET 1 OF 1	